



Normative Theories of Accounting 1: The Case of Accounting for Changing Prices and Asset Values

❖ *LEARNING OBJECTIVES*

Upon completing this chapter readers should:

- ❖ be aware of some particular limitations of historical cost accounting in terms of its ability to cope with various issues associated with changing prices and changing market conditions;
- ❖ be aware of a number of alternative methods of accounting that have been developed to address problems associated with changing prices and market conditions in arriving at asset values, including fair value accounting;
- ❖ be able to identify some of the strengths and weaknesses of the various alternative accounting methods;
- ❖ understand that the calculation of income under a particular method of accounting will depend on the perspective of capital maintenance that has been adopted.

Opening issues

Various asset valuation approaches are often adopted in the financial statements of large corporations. Non-current assets acquired (or perhaps revalued) in different years will simply be added together to give a total euro value, even though the various costs or valuations might provide little reflection of the current values of the respective assets. For example, pursuant to IAS 16 ‘Property, Plant and Equipment’ it is permissible for some classes of property, plant and equipment to be measured at cost, less a provision for depreciation, while other classes of property, plant and equipment may be measured at their current fair value (supposedly reflective of current market conditions). The different measurements are then simply added together to give a total value of property, plant and equipment – with the total neither representing cost nor fair value.

Issues to consider:

- What are some of the criticisms that can be made in relation to the practice of accounting wherein we add together, without adjustment, assets that have been acquired or valued in different years, when both the purchasing power of the euro and the market conditions that together give rise to valuations were conceivably quite different?
- What are some of the alternative methods of accounting (alternatives to historical cost accounting) that have been advanced to cope with the issue of changing prices and changing market conditions, and what acceptance have these alternatives received from the accounting profession?
- What are the strengths and weaknesses of the alternatives to historical cost?

5.1 Introduction

In Chapter 3 we considered various theoretical explanations about why regulation might be put in place. Perspectives derived from *public interest theory*, *capture theory* and the *economic interest theory of regulation* did not attempt to explain what form of regulation was most optimal or efficient. Rather, by adopting certain theoretical assumptions about individual behaviour and motivations, these theories attempted to explain which parties were most likely to try, and perhaps succeed in, affecting the regulatory process.

In this chapter we consider a number of *normative theories* of accounting. Based upon particular judgements about the types of information people *need* (which could be different from what they *want*), the various normative theories provide prescriptions about how the process of financial accounting *should* be undertaken.¹

¹ Positive theories, by contrast, attempt to explain and predict accounting practice without seeking to prescribe particular actions. Positive accounting theories are the subject of analysis in Chapter 7.

Across time, numerous normative theories of accounting have been developed by a number of well-respected academics. However, these theories have typically failed to be embraced by the accounting profession, or to be mandated within financial accounting regulations. Relying in part on material introduced in Chapter 3, we consider why some proposed methods of accounting are ultimately accepted by the profession and/or accounting standard-setters, while many are dismissed or rejected. We question whether the rejection is related to the *merit* of their arguments (or lack thereof), or due to the *political nature* of the standard-setting process wherein various vested interests and economic implications are considered. In this chapter we specifically consider various prescriptive theories of accounting (normative theories) that were advanced by various people on the basis that historical cost accounting has too many shortcomings, particularly in times of rising prices and changing market conditions. Some of these shortcomings were summarized by the International Accounting Standards Committee (which was subsequently replaced by the International Accounting Standards Board) in IAS 29 'Financial Reporting in Hyperinflationary Economies':

In a hyperinflationary economy, reporting of operating results and financial position in the local currency without restatement is not useful. Money loses purchasing power at such a rate that comparison of amounts from transactions and other events that have occurred at different times, even within the same accounting period, is misleading. (paragraph 2)

5.2 Limitations of historical cost accounting in times of rising prices

Over time, criticisms of historical cost accounting have been raised by a number of notable scholars, particularly in relation to its inability to provide useful information in times of rising prices and changing market conditions. For example, criticisms were raised by Sweeney, MacNeal, Canning and Paton in the 1920s and 1930s. From the 1950s the levels of criticism increased, with notable academics (such as Chambers, Sterling, Edwards and Bell) prescribing different models of accounting that they considered provided more useful information than was available under conventional historical cost accounting. Such work continued through to the early 1980s, but declined thereafter as levels of inflation throughout the world began to drop. Subsequently the debate changed to focus on the use of current market values – known as *fair values* – (supposedly reflecting current market conditions at the accounting date) for valuing assets, rather than amending historic costs simply to take account of inflation.²

Across time, these criticisms appear to have been accepted by accounting regulators – at least on a piecemeal basis. In recent years, for example, various accounting standards have been released that require or permit the application of fair values when measuring assets. These include: financial instruments (pursuant to IAS 39), property, plant and equipment (where the fair value model has been adopted pursuant to IAS 16 – this accounting standard

² For example, there is a great deal of debate about whether stock (inventory) measurement rules (which require inventory to be measured at the lower of cost and net realizable value pursuant to IAS 2) provide relevant information in situations where the market (fair) value of the inventory greatly exceeds its cost.

gives financial statement preparers a choice between the cost model and the fair value model in the measurement of property, plant and equipment), some intangible assets (where there is an 'active market' pursuant to IAS 38), investment properties (pursuant to IAS 14), and biological assets (pursuant to IAS 41) that are required to be valued at fair value as opposed to historical cost.

Historical cost accounting assumes that money holds a constant purchasing power. As Elliot (1986, p. 33) states:

An implicit and troublesome assumption in the historical cost model is that the monetary unit is fixed and constant over time. However, there are three components of the modern economy that make this assumption less valid than it was at the time the model was developed.³

One component is specific price-level changes, occasioned by such things as technological advances and shifts in consumer preferences; the second component is general price-level changes (inflation); and the third component is the fluctuation in exchange rates for currencies. Thus, the book value of a company, as reported in its financial statements, only coincidentally reflects the current value of assets.

Again it is emphasized that under our current accounting standards many assets can or must be measured at historical cost. For example, inventory (or stock) must be measured at cost – or net realizable value if it is lower – and property plant and equipment can be valued at cost where an entity has adopted the 'cost model' for a class of property, plant and equipment pursuant to IAS 16. While there was much criticism of historical cost accounting during the high inflation periods of the 1970s and 1980s, there were also many who supported historical cost accounting. The method of accounting predominantly used today is still based on historical cost accounting, although the conceptual frameworks we discuss in the next chapter, and some recent accounting standards (as noted above), have introduced elements of current value – or fair value – measurements. Hence, the accounting profession and reporting entities have tended to maintain at least partial support for this historical cost approach.⁴ The very fact that historical cost accounting has continued to be applied by business entities has been used by a number of academics to support its continued use, which in a sense is a form of *accounting-Darwinism* perspective – the view that those things that are most efficient and effective will survive over time. For example, Mautz (1973) states:

Accounting is what it is today not so much because of the desire of accountants as because of the influence of businessmen. If those who make management and investment decisions had not found financial reports based on

³ As indicated in Chapter 2, the historical cost method of accounting was documented as early as 1494 by the Franciscan monk Pacioli in his famous work *Summa de Arithmetica, Geometrica, Proportioni et Proportionalita*.

⁴ IAS 16 provides reporting entities with an option to adopt either the 'cost model' (measuring property, plant and equipment at historical cost) or the 'fair value model' for measuring classes of property, plant and equipment. The 'fair value model' requires the revaluation of the assets to their fair value (which in itself means that a modified version of historical cost accounting can be used), which is one way to take account of changing values. Basing revised depreciation on the revalued amounts is one limited way of accounting for the effects of changing prices.

historical cost useful over the years, changes in accounting would long since have been made.^{5,6}

It has been argued (for example, Chambers, 1966) that historical cost accounting information suffers from problems of irrelevance in times of rising prices. That is, it is questioned whether it is useful to be informed that something cost a particular amount many years ago when its current value (as perhaps reflected by its replacement cost, or current market value) might be considerably different. It has also been argued that there is a real problem of additivity. At issue is whether it is really logical to add together assets acquired in different periods when those assets were acquired with euros of different purchasing power.⁷

In a number of countries, organizations are permitted to revalue their non-current assets. What often happens, however, is that different assets are revalued in different periods (with the local currency – for example dollars or euros – having different purchasing power in each period), yet the revalued assets might all be added together, along with assets that have continued to be valued at cost, for the purposes of disclosure in the statement of financial position (formerly known as the balance sheet).⁸

There is also an argument that methods of accounting that do not take account of changing prices, such as historical cost accounting, can tend to overstate profits in times of rising prices, and that distribution to shareholders of historical cost profits can actually lead to an erosion of operating capacity. For example, assume that a company commenced operations at the beginning of the year 2012 with €100,000 in inventory comprising 20,000 units at €5.00 each. If at the end of the year all the inventory had been sold, there were assets (cash) of €140,000 and throughout the year there had been no contributions from owners, no borrowings and no distributions to owners, then profit under a historical cost system would be €40,000. If the entire profit of €40,000 was distributed to owners

⁵ However, because something continues to be used does not mean that there is nothing else that might not be better. This is a common error made by proponents of decision usefulness studies. Such studies attempt to provide either support for, or rejection of, something on the basis that particular respondents or users indicated that it would, or would not, be useful for their particular purposes. Often there are things that might be more 'useful' – but they are unknown by the respondents. As Gray *et al.* (1996, p. 75) state: 'Decision usefulness purports to describe the central characteristics of accounting in general and financial statements in particular. To describe accounting as useful for decisions is no more illuminating than describing a screwdriver as being useful for digging a hole – it is better than nothing (and therefore "useful") but hardly what one might ideally like for such a task.'

⁶ Reflective of the lack of agreement in the area, Elliot (1986) adopts a contrary view. Still relying upon metaphors associated with evolution, Elliot (1986, p. 35) states: 'There is growing evidence in the market place ... that historical cost-basis information is of ever declining usefulness to the modern business world. The issue for the financial accounting profession is to move the accounting model toward greater relevance or face the fate of the dinosaur and the messenger pigeon.'

⁷ Again, under existing accounting standards, assets such as property, plant and equipment can be measured at fair value or at cost. IAS 16 gives reporting entities the choice between applying the fair value model or the cost model to the different classes of property, plant and equipment. Hence, we are currently left with a situation where, even within a category of assets (for example, property, plant and equipment), some assets might be measured at cost while others might be measured at fair value.

⁸ In relation to property, plant and equipment, IAS 16 requires that where revaluations to fair value are undertaken, the revaluations must be made with sufficient regularity to ensure that the carrying amount of each asset in the class does not differ materially from its fair value at the reporting date. Nevertheless, there will still be instances where some assets have not been revalued for three to five years but they will still be aggregated with assets that have been recently revalued.

in the form of dividends, then the financial capital would be the same as it was at the beginning of the year. Financial capital would remain intact.⁹

However, if prices had increased throughout the period, then the actual operating capacity of the entity may not have remained intact. Let us assume that the company referred to above wishes to acquire another 20,000 units of inventory after it has paid €40,000 in dividends, but finds that the financial year-end replacement cost has increased to €5.40 per unit. The company will only be able to acquire 18,518 units with the €100,000 it still has available. By distributing its total historical cost profit of €40,000, with no adjustments being made for rising prices, the company's ability to acquire goods and services has fallen from one period to the next. Some advocates of alternative approaches to accounting would prescribe that the profit of the period is more accurately recorded as €140,000, less 20,000 units at €5.40 per unit, which then equals €32,000. That is, if €32,000 is distributed to owners in dividends, the company can still buy the same amount of inventory (20,000 units) as it had at the beginning of the period – its purchasing power remains intact.¹⁰ Despite the problems associated with measuring inventory at historical cost, as illustrated above, organizations are still required to measure their inventory at cost (or net realizable value if it is lower than cost) pursuant to IAS 2.

In relation to the treatment of changing prices we can usefully, and briefly, consider IAS 41 'Agriculture'. IAS 41 provides the measurement rules for biological assets (for example, for grapevines or cattle). The accounting standard requires that changes in the fair value of biological assets from period to period be treated as part of the period's profit or loss. In the development of the accounting standard there were arguments by some researchers (Roberts *et al.*, 1995) that the increases in fair value associated with changing prices should be differentiated from changes in fair value that are due to physical changes (for example, changes in the size or number of the biological assets). The argument was that only the physical changes should be treated as part of profit or loss. Although IAS 41 treats the total change in fair value as part of income it is interesting to note that IAS 41 'encourages' disclosures which differentiate between changes in the fair values of the biological assets which are based upon price changes and those based upon physical changes. As paragraph 51 of IAS 41 states:

The fair value less costs to sell of a biological asset can change due to both physical changes and price changes in the market. Separate disclosure of physical and price changes is useful in appraising current period performance and future prospects, particularly when there is a production cycle of more than one year. In such cases, an entity is encouraged to disclose, by group or otherwise, the amount of the change in fair value less costs to sell included in profit or loss due

⁹ While it might be considered that measuring inventory at fair value would provide relevant information, IAS 2 'Inventories' prohibits the revaluation of inventory. Specifically, IAS 2 requires inventory to be measured at the lower of cost and net realizable value.

¹⁰ In some countries, such as the United States, an inventory cost flow assumption based on the last-in-first-out (LIFO) method can be adopted (this cost flow assumption is not allowed under IAS 2). The effect of employing LIFO is that cost of goods sold will be determined on the basis of the latest cost, which in times of rising prices will be higher, thereby leading to a reduction in reported profits. This does provide some level of protection (although certainly not complete) against the possibility of eroding the real operating capacity of the organization.

to physical changes and due to price changes. This information is generally less useful when the production cycle is less than one year (for example, when raising chickens or growing cereal crops).

In relation to the above disclosure guidance it is interesting to consider why the regulators considered that financial statement users would benefit from separate disclosure of price changes and physical changes in relation to agricultural assets when similar suggestions are not provided within other accounting standards relating to other categories of assets. This is somewhat inconsistent.

Returning to the use of historical cost in general, it has also been argued that historical cost accounting distorts the current year's operating results by including in the current year's income holding gains that actually accrued in previous periods.¹¹ For example, some assets may have been acquired at a very low cost in a previous period (and perhaps in anticipation of future price increases pertaining to the assets), yet under historical cost accounting the gains attributable to such actions will only be recognized in the subsequent periods when the assets are ultimately sold. As an illustration, let us assume that a reporting entity acquired some land in 2004 for €1,000,000. Its fair value increased to €1,300,000 in 2008 and then €1,700,000 in 2011. A decision is made to sell the land in 2012 for its new fair value of €1,900,000. If the land had been measured at cost then the entire profit of €900,000 would be shown in the 2012 financial year even though the increase in fair value accrued throughout the previous eight years. Arguably placing all the gain in the last year's profits distorts the results of that financial period as well as the results of preceding periods. Another potential problem of historical cost accounting is it can lead to a distortion of 'return-on-asset' measures. For example, consider an organization that acquired some machinery for €1 million and returned a profit of €100,000. Such an organization would have a return on assets of 10 per cent. If another organization later acquired the same type of asset for €2 million (due to rising prices) and generated a profit of €150,000, then on the basis of return on assets the second organization would appear less efficient, pursuant to historical cost accounting.

There is a generally accepted view that dividends should only be paid from profits (and this is enshrined within the corporations laws of many countries). However, one central issue relates to how we measure profits. There are various definitions of profits. One famous definition was provided by Hicks (1946), that is that profits (or 'income' as he referred to it) is the maximum amount that can be consumed during a period while still expecting to be as well off at the end of the period as at the beginning of the period. Any consideration of 'well-offness' relies upon a notion of capital maintenance – but which one? Different notions will provide different perspectives of profit.

There are a number of perspectives of capital maintenance. One version of capital maintenance is based on maintaining financial capital intact, and this is the position taken in historical cost accounting. Under historical cost accounting, dividends should normally only be paid to the extent that the payment will not erode financial capital, as illustrated in the earlier example of a company needing to replace 20,000 units of inventory where €40,000 is distributed to owners in the form of dividends and no adjustment is made to take account of changes in prices and the related impact on the purchasing power of the entity.

¹¹ Holding gains are those that arise while an asset is in the possession of the reporting entity.

Another perspective of capital maintenance is one that aims at maintaining purchasing power intact.¹² Under this perspective, historical cost accounts are adjusted for changes in the purchasing power of the euro (typically by use of the price index) which, in times of rising prices, will lead to a reduction in income relative to the income calculated under historical cost accounting. As an example, under general price level adjustment accounting (which we will consider more fully later in this chapter) the historical cost of an item is adjusted by multiplying it by the chosen price index at the end of the current period, divided by the price index at the time the asset was acquired. For example, if some land, which was sold for €1,200,000, was initially acquired for €1,000,000 when the price index was 100, and the price index at the end of the current period is 118 (reflecting an increase in prices of 18 per cent), then the adjusted cost would be €1,180,000. The adjusted profit would be €20,000 (compared to an historical cost profit of €200,000).¹³ What should be realized is that under this approach to accounting where adjustments are made by way of a general price index, the value of €1,180,000 will not necessarily (except due to chance) reflect the current market value of the land. Various assets will be adjusted using the same general price index.

Use of actual current values (as opposed to adjustments to historical cost using price indices) is made under another approach to accounting that seeks to provide a measure of profits which, if distributed, maintains physical operating capital intact. This approach to accounting (which could be referred to as current cost accounting) relies upon the use of current values, which could be based on present values, entry prices (for example, replacement costs) or exit prices.

Reflective of the attention that the impact of inflation was having on financial statements, Accounting Headline 5.1 reproduces an article that appeared in *Accountancy* in January 1974 (a period of high inflation – and a time when debate in this area of accounting was widespread). The impact of high levels of inflation continued into the early 1980s in many western nations and its continued impact on accounting information is reflected in Accounting Headline 5.2, which reproduces a further *Accountancy* article, this time from 1980.

In the discussion that follows we consider a number of different approaches to undertaking financial accounting in times of rising prices. This discussion is by no means exhaustive but does give some insight into some of the various models that have been prescribed by various parties.¹⁴

¹² Gray *et al.* (1996, p. 74) also provide yet another concept of capital maintenance – one that includes environmental capital. They state ‘it is quite a simple matter to demonstrate that company “income” contains a significant element of capital distribution – in this case “environmental capital”. An essential tenet of accounting is that income must allow for the maintenance of capital. Current organizational behaviour clearly does not maintain environmental capital and so overstates earnings. If diminution of environmental capital is factored into the income figure it seems likely that no company in the western world has actually made any kind of a profit for many years.’ We will consider this issue further in Chapter 9.

¹³ Hence, if €20,000 is distributed as dividends, the entity would still be in a position to acquire the same land that it had at the beginning of the period (assuming that actual prices increased by the same amount as the particular price index used).

¹⁴ For example, we will not be considering one approach to determining income based on present values which did not have wide support, but would be consistent with Hicks’ income definition (and which might be considered as a *true income* approach). A present value approach would determine the discounted present value of the firm’s assets and liabilities and use this as the basis for the financial statements. Under such an approach the calculated value of assets will depend upon various expectations, such as expectations about the cash flows the asset would return through its use in production (its value in use) or its current market value (value in exchange). Such an approach relies upon many assumptions and judgements, including the determination of the appropriate discount rate. Under a present value approach to accounting, profit would be determined as the amount that could be withdrawn, yet maintain the present value of the net assets intact from one period to the next.

Accounting Headline 5.1

An insight into some professional initiatives in the area of accounting for changing prices

CPP accounting – an end or a beginning?

There are two methods of inflation accounting, current purchasing power [CPP] accounting and replacement cost accounting [RCA], and the relative merits of the two were elaborated and discussed throughout [a] day-long conference, organised and jointly sponsored by the English Institute [of Chartered Accountants] and the *Financial Times*. After an introduction by the chairman, Sir Ronald Leach CBE FCA (also chairman of the Accounting Standards Steering Committee), in which he outlined the compromise reached between the Government and the Institute on the production of a provisional [accounting] standard for inflation accounting, Chris Westwick presented his case for the use of CPP accounting. Current purchasing power accounting involves substitution of the current pound in the accounts, whereas replacement cost accounting utilises revaluation of the company's assets on the basis of their replacement cost. Mr Westwick felt CPP accounting

would provide more information to the shareholder, being concerned with the maintenance of the shareholders' capital rather than the maintenance of physical assets (as in the RCA method), and therefore would be the more suitable technique to employ. He said that RCA placed too much importance on the business of the company, and not enough on making money for shareholders, also tending to ignore the gain on long-term money.

The second speaker was R. S. Allen, a director of J. A. Scrimgeour and a council member of the society of investment analysts; he likened CPP accounting to Esperanto – conceived in idealism but not practicable; he was, needless to say, putting the other point of view. Mr Allen favoured the RCA method as something within the shareholder's grasp, but also acceptable to management and appropriate, since inflation increases the value of assets.

Source: *Accountancy*, January 1974, p. 6.

Accounting Headline 5.2

The need for accounting for changing prices

SSSP 16 – a standard for all

... as the president of the Institute [of Chartered Accountants in England and Wales], David Richards FCA, made clear at the annual dinner of the Nottingham Society

of Chartered Accountants on 14 March ... [that] useful as it may be, 'historic cost accounting has an unfortunate tranquillising side-effect in not a few boardrooms. The

historic cost figures often look good – on paper – and they tend to induce a boardroom euphoria. It is only when these figures are adjusted for the effects of a diminishing pound that the more realistic picture of past performance of the company begins to emerge.'

Arguably, current cost accounting, and a general awareness of the effects of inflation,

are, if anything, more important to the small organisation than to the large. After the best part of a decade of high-level inflation, there is little excuse for the medium to large company being unaware of the problem, or lacking trained accounting staff to highlight it.

Source: *Accountancy*, April 1980, p. 1.

5.3 Current purchasing power accounting

Current purchasing power (CPP) accounting (or as it is also called, general purchasing power accounting, general price level accounting, or constant dollar/euro accounting) can be traced to the early works of such authors as Sweeney (1964, but originally published in 1936) and has since been favoured by a number of other researchers. CPP accounting has also, at various times, been supported by professional accounting bodies throughout the world, but more in the form of supplementary disclosures to accompany financial statements prepared under historical cost accounting principles. CPP accounting was developed on the basis of a view that, in times of rising prices, if an entity were to distribute unadjusted profits based on historical costs the result could be a reduction in the real value of an entity – that is, in real terms the entity could risk distributing part of its capital (as we saw in an earlier example).

In considering the development of accounting for changing prices, the majority of research initially related to restating historical costs to account for changing prices by using historical cost accounts as the basis, but restating the accounts by use of particular price indices. This is the approach we consider in this section of the chapter. The literature then tended to move towards current cost accounting (which we consider later in this chapter), which changed the basis of measurement to current values as opposed to restated historical values. Consistent with this trend, the accounting profession initially tended to favour price-level-adjusted accounts (using indices), but then tended to switch to current cost accounting which required the entity to find the current values of the individual assets held by the reporting entity.^{15, 16}

CPP accounting, with its reliance on the use of indices, is generally accepted as being easier and less costly to apply than methods that rely upon current valuations of particular

¹⁵ Current values could be based on *entry* or *exit* prices. As we will see, there is much debate as to which 'current' value is most appropriate.

¹⁶ Professional support for the use of replacement costs appeared to heighten around the time of the 1976 release of ASR 190 within the United States.

assets.¹⁷ It was initially considered by some people that it would be too costly and perhaps unnecessary to attempt to find current values for all the individual assets. Rather than considering the price changes of specific goods and services, it was suggested on practical grounds that price indices be used.

Calculating indices

When applying general price level accounting, a price index must be applied. A price index is a weighted average of the current prices of goods and services relative to a weighted average of prices in a prior period, often referred to as a base period. Price indices may be broad or narrow – they may relate to changes in prices of particular assets within a particular industry (a specific price index), or they might be based on a broad cross-section of goods and services that are consumed (a general price index, such as a Consumer Price Index (CPI) or Retail Price Index (RPI)).

But which price indices should be used? Should we use changes in a general price index (for example, as reflected in the UK by the CPI or RPI) or should we use an index that is more closely tied to the acquisition of production-related resources? There is no clear answer. From the shareholders' perspective the CPI or RPI may more accurately reflect their buying pattern – but prices will not change by the same amount for shareholders in different locations. Further, not everybody will have the same consumption patterns as is assumed when constructing a particular index. The choice of an index can be very subjective. Where CPP accounting has been recommended by particular professional bodies, CPI/RPI-type indices have been suggested.

Because CPP relies upon the use of price indices, it is useful to consider how such indices are constructed. To explain one common way that indices may be constructed we can consider the following example which is consistent with how the UK Consumer Price Index is determined. Let us assume that there are three types of commodities (A, B and C) that are consumed in the following base year quantities and at the following prices:

Year	Commodity A		Commodity B		Commodity C	
	Price €	Quantity	Price €	Quantity	Price €	Quantity
Base year (2012)	10.00	100	15.00	200	20.00	250
2013	12.00		15.50		21.20	

From the above data we can see that prices have increased. The price index in the base year is frequently given a value of 100 and it is also frequently assumed that consumption

¹⁷ However, many questions can be raised with regard to what the restated value actually represents after being multiplied by an index such as the general rate of inflation. This confusion is reflected in studies that question the relevance of information restated for changes in purchasing power.

quantities (or proportions between the different commodities) thereafter remain the same, such that the price index at the end of year 2011 would be calculated as:

$$100 \times \frac{(12.00 \times 100) + (15.50 \times 200) + (21.20 \times 250)}{(10.00 \times 100) + (15.00 \times 200) + (20.00 \times 250)} = 106.67100$$

From the above calculations we can see that the prices within this particular 'bundle' of goods have been calculated as rising on average by 6.67 per cent from the year 2012 to the year 2013. The reciprocal of the price index represents the change in general purchasing power across the period. For example, if the index increased from 100 to 106.67, as in the above example, the purchasing power of the euro would be 93.75 per cent (100/106.67) of what it was previously. That is, the purchasing power of the euro has decreased.

Performing current purchasing power adjustments

When applying CPP, all adjustments are done at the end of the period, with the adjustments being applied to accounts prepared under the historical cost convention. When considering changes in the value of assets as a result of changes in the purchasing power of money (due to inflation) it is necessary to consider monetary assets and non-monetary assets separately. Monetary assets are those assets that remain fixed in terms of their monetary value, for example cash and claims to a specified amount of cash (such as trade debtors and investments that are redeemable for a set amount of cash). These assets will not change their monetary value as a result of inflation. For example, if we are holding €10 in cash and there is rapid inflation, we will still be holding €10 in cash, but the asset's purchasing power will have decreased over time.

Non-monetary assets can be defined as those assets whose monetary equivalents will change over time as a result of inflation, and would include such things as plant and equipment and inventory. For example, inventory may cost €100 at the beginning of the year, but the same inventory could cost, say, €110 at the end of the year due to inflation. Relative to monetary assets, the purchasing power of non-monetary assets is assumed to remain constant even in the presence of inflation.

Most liabilities are fixed in monetary terms (there is an obligation to pay a pre-specified amount of cash at a particular time in the future independent of the change in the purchasing power of the particular currency) and hence liabilities would typically be considered as monetary items (monetary liabilities). Non-monetary liabilities, on the other hand, although less common, would include obligations to transfer goods and services in the future, items which could change in terms of their monetary equivalents.

Net monetary assets would be defined as monetary assets less monetary liabilities. In times of inflation, holders of monetary assets will lose in real terms as a result of holding the monetary assets, as the assets will have less purchasing power at the end of the period relative to what they had at the beginning of the period (and the greater the level of general price increases, the greater the losses). Conversely, holders of monetary liabilities will gain, given that the amount they have to repay at the end of the period will be worth less (in terms of purchasing power) than it was at the beginning of the period.

Let us consider an example to demonstrate how gains and losses might be calculated on monetary items (and under CPP, gains and losses will relate to net monetary assets rather

than net non-monetary assets). Let us assume that an organization holds the following assets and liabilities at the beginning of the financial year:

	€
Current assets	
Cash	6,000
Inventory	9,000
	<u>15,000</u>
Non-current assets	
Land	10,000
Total assets	<u>25,000</u>
Liabilities	
Bank loan	5,000
Owners' equity	<u>20,000</u>

Let us also assume that the general level of prices has increased 5 per cent since the beginning of the year and let us make a further simplifying assumption (which will be relaxed later) that the company did not trade during the year and that the same assets and liabilities were in place at the end of the year as at the beginning. Assuming that general prices, perhaps as reflected by changes in the CPI, have increased by 5 per cent, then the CPI-adjusted values would be:

	Unadjusted	Price adjustment factor	Adjusted
	€		€
Current assets			
Cash	6,000		6,000
Inventory	9,000	0.05	9,450
	<u>15,000</u>		<u>15,450</u>
Non-current assets			
Land	10,000	0.05	10,500
Total assets	<u>25,000</u>		<u>25,950</u>
Liabilities			
Bank loan	5,000		5,000
Owners' equity	<u>20,000</u>		<u>20,950</u>

Again, monetary items are not adjusted by the change in the particular price index because they will retain the same monetary value regardless of inflation. Under CPP there is an assumption that the organization has not gained or lost in terms of the purchasing power attributed to the non-monetary assets, but, rather, it will gain or lose in terms of purchasing

power changes attributable to its holdings of the net monetary assets. In the above example, to be as 'well off' at the end of the period the entity would need €21,000 in net assets (which equals $€20,000 \times 1.05$) to have the same purchasing power as it had one year earlier (given the general increase in prices of 5 per cent). In terms of end-of-year euros, in the above illustration the entity is €50 worse off in adjusted terms (it only has net assets with an adjusted value of €20,950, which does not have the same purchasing power as €20,000 did at the beginning of the period). As indicated above, this €50 loss relates to the holdings of net monetary assets and not to the holding of non-monetary assets, and is calculated as the balance of cash, less the balance of the bank loan, multiplied by the general price level increase. That is, $(€6,000 - €5,000) \times 0.05$. If the monetary liabilities had exceeded the monetary assets throughout the period, a purchasing power gain would have been recorded. If the amount of monetary assets held was the same as the amount of monetary liabilities held, then no gain or losses would result.

Again, it is stressed that under CPP no change in the purchasing power of the entity is assumed to arise as a result of holding non-monetary assets. Under general price level accounting, non-monetary assets are restated to current purchasing power and no gain or loss is recognized. Purchasing power losses (or gains) arise only as a result of holding net monetary assets. As noted at paragraph 7 of Provisional Statement of Standard Accounting Practice 7 (PSSAP 7), issued in the United Kingdom in 1974:

Holders of non-monetary assets are assumed neither to gain nor to lose purchasing power by reason only of inflation as changes in the prices of these assets will tend to compensate for any changes in the purchasing power of the pound.

An important issue to consider is how the purchasing power gains and losses should be treated for income purposes. Should they be treated as part of the period's profit or loss, or should they be transferred directly to a reserve? Generally, where this method of accounting has been recommended it has been advised that the gain or loss should be included in income. Such recommendations are found in the US Accounting Research Bulletin No. 6 (issued in 1961); in the Accounting Principles Board (APB) Statement No. 3 (issued in 1969 by the American Institute of Certified Public Accountants (AICPA)); in the Financial Accounting Standards Board's (FASB) Exposure Draft entitled 'Financial Reporting in Units of General Purchasing Power'; and within Provisional Statement of Accounting Practice No. 7 issued by the Accounting Standards Steering Committee (UK) in 1974.

As a further example of calculating gains or losses in purchasing power pertaining to monetary items, let us assume four quarters with the following CPI index figures:

At the beginning of the year	120
At the end of the first quarter	125
At the end of the second quarter	130
At the end of the third quarter	132
At the end of the fourth quarter	135

Let us also assume the following movements in net monetary assets (total monetary assets less total monetary liabilities):

Opening net monetary assets		€100,000
Inflows:		
First quarter net inflow	20,000	
Second quarter net inflow	<u>24,000</u>	
Total inflows		44,000
Outflows:		
Third quarter net outflow	(17,000)	
Fourth quarter net outflow	<u>(13,000)</u>	
Total outflows		(30,000)
Closing net monetary assets		<u>€114,000</u>

In terms of year-end purchasing power euros, the purchasing power gain or loss can be calculated as:

	Unadjusted euros		Price index		Adjusted euros
Opening net monetary assets	€100,000	×	135/120	=	€112,500
Inflows:					
First quarter net inflow	€20,000	×	135/125	=	€21,600
Second quarter net inflow	€24,000	×	135/130	=	€24,923
Outflows:					
Third quarter net outflow	€(17,000)	×	135/132	=	€(17,386)
Fourth quarter net outflow	€(13,000)	×	135/135	=	€(13,000)
Net monetary assets adjusted for changes in purchasing power					<u>€128,637</u>

What the above calculation reflects is that to have the same purchasing power as when the particular transactions took place, then in terms of end-of-period euros, €128,637 in net monetary assets would need to be on hand at year end.¹⁸ The actual balance on hand, however, is €114,000. Hence, there is a purchasing power loss of €14,637 which under CPP would be treated as an expense in the profit and loss account.

Let us now consider a more realistic example of CPP adjustments. We will restate the financial statements to reflect purchasing power as at the end of the current financial year.

¹⁸ For example, we can consider the initial net monetary asset balance of €100,000 at the beginning of the period. For illustration, we can assume that this was represented by cash of €100,000. Given the inflation which has caused general prices to rise from a base of 120 to 135, to have the same general purchasing power at the end of the period an amount of cash equal to €112,500 would need to be on hand. The difference between the required amount of €112,500 and the actual balance of €100,000 is treated as a purchasing power loss relating to holding the cash. Conversely, if the net monetary balance had been (€100,000), meaning that monetary liabilities exceeded monetary assets, then we would have gained, as the purchasing power of what we must pay has decreased over time.

Let us assume that the entity commenced operation on 1 January 2012 and the unadjusted statement of financial position (or balance sheet) is as follows:

CPP plc statement of financial position as at 1 January 2012		
Current assets		
Cash	10,000	
Inventory	<u>25,000</u>	35,000
Non-current assets		
Plant and equipment	90,000	
Land	<u>75,000</u>	<u>165,000</u>
Total assets		<u>200,000</u>
Current liabilities		
Bank overdraft	10,000	
Non-current liabilities		
Bank loan	<u>10,000</u>	
Total liabilities		<u>20,000</u>
Net assets		<u>180,000</u>
Represented by:		
Shareholders' funds		
Paid up capital		<u>180,000</u>

As a result of its operations for the year, CPP plc had the historical cost income statement (profit and loss account) and balance sheet at year end as shown below:

CPP plc income statement for year ended 31 December 2012		
Sales revenue		200,000
<i>Less:</i>		
Cost of goods sold		
Opening inventory	25,000	
Purchases	<u>110,000</u>	
	135,000	
Closing inventory	<u>35,000</u>	<u>100,000</u>
Gross profit		<u>100,000</u>
Other expenses		
Administrative expenses	9,000	
Interest expense	1,000	
Depreciation	<u>9,000</u>	<u>19,000</u>
Operating profit before tax		<u>81,000</u>
Tax		<u>26,000</u>
Operating profit after tax		<u>55,000</u>
Opening retained earnings		0
Dividends proposed		<u>15,000</u>
Closing retained earnings		<u>40,000</u>

CPP plc statement of financial position as at 31 December 2012		
Current assets		
Cash	100,000	
Trade debtors	20,000	
Inventory	<u>35,000</u>	155,000
Non-current assets		
Plant and equipment	90,000	
Accumulated depreciation	(9,000)	
Land	<u>75,000</u>	<u>156,000</u>
Total assets		311,000
Current liabilities		
Bank overdraft	10,000	
Trade creditors	30,000	
Tax payable	26,000	
Provision for dividends	<u>15,000</u>	
	81,000	
Non-current liabilities		
Bank loan	<u>10,000</u>	
Total liabilities		<u>91,000</u>
Net assets		<u>220,000</u>
Represented by:		
Shareholders' funds		
Paid up capital		180,000
Retained earnings		<u>40,000</u>
		<u>220,000</u>

As we have already stated, under CPP gains or losses only occur as a result of holding net monetary assets. To determine the gain or loss, we must consider the movements in the net monetary assets. For example, if the organization sold inventory during the year, this will ultimately impact on cash. However, over time, the cash will be worth less in terms of its ability to acquire goods and services, hence there will be a purchasing power loss on the cash that was received during the year. Conversely, expenses will decrease cash during the year. In times of rising prices, more cash would be required to pay for the expense, hence in a sense we gain in relation to those expenses that were incurred earlier in the year (the logic being that if the expenses were incurred later in the year, more cash would have been required).

We must identify changes in net monetary assets from the beginning of the period until the end of the period.

Movement in net monetary assets from 1 January 2012 to 31 December 2012		
	1 January 2012	31 December 2012
Monetary assets		
Cash	10,000	100,000
Trade debtors		20,000
	<u>10,000</u>	<u>120,000</u>
Less:		
Monetary liabilities		
Bank overdraft	10,000	10,000
Trade creditors		30,000
Tax payable		26,000
Provision for dividends		15,000
Bank loan	10,000	10,000
Net monetary assets	<u>(10,000)</u>	<u>29,000</u>

To determine any adjustments in CPP plc we must identify the reasons for the change in net monetary assets.

Reconciliation of opening and closing net monetary assets	
Opening net monetary assets	(10,000)
Sales	200,000
Purchase of goods	(110,000)
Payment of interest	(1,000)
Payment of administrative expenses	(9,000)
Tax expense	(26,000)
Dividends	<u>(15,000)</u>
Closing net monetary assets	<u>29,000</u>

What we need to determine is whether, had all the transactions taken place at year end, the company would have had to transfer the same amount, measured in monetary terms, as it actually did. Any payments to outside parties throughout the period would have required a greater payment at the end of the period if the same items were to be transferred. Any receipts during the year will, however, be worth less in purchasing power.

To adjust for changes in purchasing power we need to have details about how prices have changed during the period, and we also need to know when the actual changes took place. We make the following assumptions:

- The interest expense and administrative expenses were incurred uniformly throughout the year.
- The tax liability did not arise until year end.

- The dividends were declared at the end of the year.
- The inventory on hand at year end was acquired in the last quarter of the year.
- Purchases of inventory occurred uniformly throughout the year.
- Sales occurred uniformly throughout the year.

We also assume that the price level index at the beginning of the year was 130. Subsequent indices were as follows:

31 December 2012	140
Average for the year	135
Average for first quarter	132
Average for second quarter	135
Average for third quarter	137
Average for fourth quarter	139

Rather than using price indices as at the particular dates of transactions (which would generally not be available) it is common to use averages for a particular period.

	Unadjusted	Index	Adjusted
Opening net monetary assets	(10,000)	140/130	(10,769)
Sales	200,000	140/135	207,407
Purchase of goods	(110,000)	140/135	(114,074)
Payment of interest	(1,000)	140/135	(1,037)
Payment of administrative expenses	(9,000)	140/135	(9,333)
Tax expense	(26,000)	140/140	(26,000)
Dividends	(15,000)	140/140	(15,000)
Closing net monetary assets	<u>29,000</u>		<u>31,194</u>

The difference between €29,000 and the amount of €31,194 represents a loss of €2,194. It is considered to be a loss, because to have the same purchasing power at year end as when the entity held the particular net monetary assets, the entity would need the adjusted amount of €31,194, rather than the actual amount of €29,000. This loss of €2,194 will appear as a 'loss on purchasing power' in the price-level-adjusted income statement (see below).

From the above balance sheet we can again emphasize that the non-monetary items are translated into euros of year-end purchasing power, whereas the monetary items are already stated in current purchasing power euros, and hence no changes are made to the reported balances of monetary assets.

One main strength of CPP is its ease of application. The method relies on data that would already be available under historical cost accounting and does not require the

Price-level-adjusted income statement for year ended 31 December 2012			
Sales revenue	200,000	140/135	207,407
Less Cost of goods sold			
Opening inventory	25,000	140/130	26,923
Purchases	110,000	140/135	114,074
	135,000		140,997
Closing inventory	35,000	140/139	35,252
	100,000		105,745
Gross profit	100,000		101,662
Other expenses			
Administrative expenses	9,000	140/135	9,333
Interest expense	1,000	140/135	1,037
Depreciation	9,000	140/130	9,692
	19,000		20,062
Operating profit before tax	81,000		81,600
Tax	26,000	140/140	26,000
Operating profit after tax	55,000		55,600
Loss on purchasing power			2,194
			53,406
Opening retained earnings	0		0
Dividends proposed	15,000	140/140	15,000
Closing retained earnings	40,000		38,406

Price-level-adjusted statement of financial position as at 31 December 2012			
Current assets			
Cash	100,000		100,000
Trade debtors	20,000		20,000
Stock	35,000	140/139	35,252
Total current assets	155,000		155,252
Non-current assets			
Plant and equipment	90,000	140/130	96,923
Accumulated depreciation	(9,000)	140/130	(9,692)
Land	75,000	140/130	80,769
Total non-current assets	156,000		168,000
Total assets	311,000		323,252
Current liabilities			
Bank overdraft	10,000		10,000
Trade creditors	30,000		30,000
Tax payable	26,000		26,000
Provision for dividends	15,000		15,000
Non-current liabilities			
Bank loan	10,000		10,000
Total liabilities	91,000		91,000
Net assets	220,000		232,252
Represented by:			
Shareholders' funds			
Paid up capital	180,000	140/130	193,846
Retained earnings	40,000		38,406
	220,000		232,252

reporting entity to incur the cost or effort involved in collecting data about the current values of the various non-monetary assets. CPI (or RPI) data would also be readily available. However, and as indicated previously, movements in the prices of goods and services included in a general price index might not be reflective of price movements involved in the goods and services involved in different industries. That is, different industries may be affected differently by inflation.

Another possible limitation is that the information generated under CPP might actually be confusing to users. They might consider that the adjusted amounts reflect the specific value of specific assets (and this is a criticism that can also be made of historical cost information). However, as the same index is used for all assets this will rarely be the case. Another potential limitation that we consider at the end of the chapter is that various studies (which have looked at such things as movements in share prices around the time of disclosure of CPP information) have failed to find much support for the view that the data generated under CPP are relevant for decision-making (the information when released caused little if any share price reaction).

Following the initial acceptance of CPP in some countries in the 1970s, there was a move towards methods of accounting that used actual current values. Support for CPP declined. We will now consider such approaches.

5.4 Current cost accounting

Current cost accounting (CCA) was one of the various alternatives to historical cost accounting that tended to gain the most acceptance. Notable advocates of this approach have included Paton (1922), and Edwards and Bell (1961). Such authors decided to reject historical cost accounting and CPP in favour of a method that considered actual valuations. As we will see, unlike historical cost accounting, CCA differentiates between profits from trading and those gains that result from holding an asset.

Holding gains can be considered as realized or unrealized. If a financial capital maintenance perspective is adopted with respect to the recognition of income, then holding gains or losses can be treated as income. Alternatively, they can be treated as capital adjustments if a physical capital maintenance approach is adopted.¹⁹ Some versions of CCA, such as that proposed by Edwards and Bell, adopt a physical capital maintenance approach to income recognition. In this approach, which determines valuations on the basis of replacement costs,²⁰ operating income represents realized revenues, less the replacement cost of the assets in question. It is considered that this generates a measure of income which represents the maximum amount that can be distributed, while maintaining operating capacity intact. For example, assume that an entity acquired 150 items of

¹⁹ In some countries non-current assets can be revalued upward by way of an increase in the asset account and an increase in a reserve, such as a revaluation reserve. This increment is typically not treated as income and therefore the treatment is consistent with a physical capital maintenance approach to income recognition (this approach is embodied within IAS 16 as it relates to property, plant and equipment, and within IAS 38 as it relates to intangible assets).

²⁰ We will also see later in this chapter that there are alternative approaches to current cost accounting that rely upon exit (sales) prices.

inventory at a cost of €10.00 each and sold 100 of the items for €15 each when the replacement cost to the entity was €12 each. We will also assume that the replacement cost of the 50 remaining items of inventory at year end was €14. Under the Edwards and Bell approach the operating profit that would be available for dividends would be €300, which is $100 \times (\text{€}15 - \text{€}12)$. There would be a realized holding gain on the goods that were sold, which would amount to $100 \times (\text{€}12 - \text{€}10)$, or €200, and there would be an unrealized holding gain in relation to closing inventory of $50 \times (\text{€}14 - \text{€}10)$, or €200. Neither the realized nor the unrealized holding gain would be considered to be available for dividend distribution.²¹

In undertaking CCA, adjustments are usually made at the year-end using the historical cost accounts as the basis of adjustments. If we adopt the Edwards and Bell approach to profit calculation, operating profit is derived after ensuring that the operating capacity of the organization is maintained intact. Edwards and Bell believe operating profit is best calculated by using replacement costs.^{22, 23} As noted above, in calculating operating profit, gains that accrue from holding an asset (holding gains) are excluded and are not made available for dividends – although they are included when calculating what is referred to as business profit. For example, if an entity acquired goods for €20 and sold them for €30, then business profit would be €10, meaning that €10 could be distributed and still leave financial capital intact (this would be the approach taken in historical cost accounting). But if the replacement cost to the entity of the goods at the time they were sold was €23, then €3 would be considered a holding gain, and to maintain physical operating capacity only €7 could be distributed – current cost operating profit would be €7. No adjustment is made to sales revenue. This €7 distribution can be compared to what could be distributed under historical cost accounting. Because historical costs accounting adopts a financial capital maintenance approach, €10 could be distributed in dividends thereby maintaining financial capital (but nevertheless causing an erosion in the operating ability of the organization).

In relation to non-current assets, for the purposes of determining current cost operating profit, depreciation is based on the replacement cost of the asset. For example, if an item of machinery was acquired at the beginning of 2012 for €100,000 and had a projected life of 10 years and no salvage value, then assuming the straight-line method of depreciation is used, its depreciation expense under historical cost accounting would be €10,000 per year. If at the end of 2012 its replacement cost had increased to €120,000, then under current cost accounting a further €2,000 would be deducted to determine current cost operating profit. However, this €2,000 would be treated as a realized cost

²¹ Comparing this approach to income calculations under historical cost accounting we see that if we add CCA operating profit of €300 and the realized holding gain of €200, then this will give the same total as we would have calculated for income under historical cost accounting.

²² In a sense, the Edwards and Bell approach represents a 'true income' approach to profit calculation. They believe that profit can only be correctly measured (that is, 'be true') after considering the various asset replacement costs.

²³ Those who favour a method of income calculation that requires a maintenance of financial capital (advocates of historical cost accounting) treat holding gains as income, while those who favour a maintenance of physical capital approach to income determination (such as Edwards and Bell) tend to exclude holding gains from income. A physical capital perspective was adopted by most countries in their professional releases pertaining to CCA.

saving (because historical cost profits would have been lower if the entity had not already acquired the asset) and would be recognized in business profit (it would be added back below operating profit) and the other €18,000 would be treated as an unrealized cost saving and would also be included in business profit. As with CPP, no restatement of monetary assets is required as they are already recorded in current euros and hence in terms of end-of-period purchasing power euros.

As an example of one version of CCA (consistent with the Edwards and Bell proposals) let us consider the following example. CCA plc's balance sheet at the commencement of the year is provided below. This is assumed to be the first year of CCA plc's operations.

CCA plc statement of financial position as at 1 January 2012		
Current assets		
Cash	10,000	
Inventory	<u>25,000</u>	35,000
Non-current assets		
Plant and equipment	90,000	
Land	<u>75,000</u>	165,000
Total assets		200,000
Current liabilities		
Bank overdraft	10,000	
Non-current liabilities		
Bank loan	<u>10,000</u>	
Total liabilities		<u>20,000</u>
Net assets		<u>180,000</u>
Represented by:		
Shareholders' funds		
Paid up capital		<u>180,000</u>

The unadjusted income statement and balance sheet for CCA plc after one year's operations are provided below.

CCA plc income statement for year ended 31 December 2012		
Sales revenue		200,000
<i>Less:</i>		
Cost of goods sold		
Opening inventory	25,000	
Purchases	110,000	
	<u>135,000</u>	
Closing inventory	<u>35,000</u>	<u>100,000</u>
Gross profit		100,000

Other expenses		
Administrative expenses	9,000	
Interest expense	1,000	
Depreciation	<u>9,000</u>	19,000
Operating profit before tax		81,000
Tax		<u>26,000</u>
Operating profit after tax		55,000
Opening retained earnings		0
Dividends proposed		<u>15,000</u>
Closing retained earnings		<u>40,000</u>

CCA plc statement of financial position as at 31 December 2012		
Current assets		
Cash	100,000	
Trade debtors	20,000	
Inventory	<u>35,000</u>	155,000
Non-current assets		
Plant and equipment	90,000	
Accumulated depreciation	(9,000)	
Land	<u>75,000</u>	156,000
Total assets		311,000
Current liabilities		
Bank overdraft	10,000	
Trade creditors	30,000	
Tax payable	26,000	
Provision for dividends	<u>15,000</u>	
		81,000
Non-current liabilities		
Bank loan	<u>10,000</u>	
Total liabilities		91,000
Net assets		<u>220,000</u>
Represented by:		
Shareholders' funds		
Paid up capital		180,000
Retained earnings		<u>40,000</u>
		<u>220,000</u>

We will assume that the inventory on hand at the year-end comprised 3,500 units that cost €10 per unit. The replacement cost at year end was €11.00 per unit. We will also assume that the replacement cost of the units actually sold during the year was €105,000

(as opposed to the historical cost of €100,000) and that the year-end replacement cost of the plant and equipment increased to €115,000. The plant and equipment has an expected life of 10 years with no residual value. The replacement cost of the land is believed to be €75,000 at year end.

CCA plc income statement for year ended 31 December 2012		
Adjusted by application of current cost accounting		
Sales revenue		200,000
<i>Less:</i>		
Cost of goods sold		105,000
		<u>95,000</u>
Other expenses		
Administrative expenses	9,000	
Interest expense	1,000	
Tax	26,000	
Depreciation ($€115,000 \times 1/10$)	<u>11,500</u>	<u>47,500</u>
Current cost operating profit		<u>47,500</u>
Realized savings		
Savings related to inventory actually sold		5,000
Savings related to depreciation actually incurred [$(115,000 - 90,000) \times 1/10$]		<u>2,500</u>
Historical cost profit		<u>55,000</u>
Unrealized savings		
Gains on holding inventory – yet to be realized		3,500
Gains on holding plant and machinery – not yet realized through the process of depreciation [$(115,000 - 90,000) \times 9/10$]		<u>22,500</u>
Business profit		<u>81,000</u>
Opening retained earnings		0
Dividends proposed		<u>15,000</u>
Closing retained earnings		<u>66,000</u>

CCA plc statement of financial position as at 31 December 2012		
Adjusted by application of current cost accounting		
Current assets		
Cash	100,000	
Trade debtors	20,000	
Inventory ($3,500 \times €11.00$)	<u>38,500</u>	158,500
Non-current assets		
Plant and equipment	115,000	
Accumulated depreciation	(11,500)	
Land	<u>75,000</u>	<u>178,500</u>
Total assets		<u>337,000</u>

Current liabilities		
Bank overdraft	10,000	
Trade creditors	30,000	
Tax payable	26,000	
Provision for dividends	15,000	
	<u>81,000</u>	
Non-current liabilities		
Bank loan	<u>10,000</u>	
Total liabilities		<u>91,000</u>
Net assets		<u>246,000</u>
Represented by:		
Shareholders' funds		
Paid up capital		180,000
Retained earnings		<u>66,000</u>
		<u>246,000</u>

Consistent with the CCA model prescribed by Edwards and Bell, all non-monetary assets have to be adjusted to their respective replacement costs. Unlike historical cost accounting, there is no need for inventory cost flow assumptions (such as last-in-first-out; first-in-first-out; weighted average). Business profit shows how the entity has gained in financial terms from the increase in cost of its resources – something typically ignored by historical cost accounting. In the above illustration, and consistent with a number of versions of CCA, no adjustments have been made for changes in the purchasing power of net monetary assets (in contrast to CPP).²⁴

The current cost operating profit before holding gains and losses, and the realized holding gains, are both tied to the notion of realization, and hence the sum of the two equates to historical cost profit.

Differentiating operating profit from holding gains and losses (both realized and unrealized) has been claimed to enhance the usefulness of the information being provided. Holding gains are deemed to be different from trading income as they are due to market-wide movements, most of which are beyond the control of management. Edwards and Bell (1961, p. 73) state:

These two kinds of gains are often the result of quite different decisions. The business firm usually has considerable freedom in deciding what quantities of assets to hold over time at any or all stages of the production process and what quantity of assets to commit to the production process itself ... The difference

²⁴ Some variants of CCA do include some purchasing power changes as part of the profit calculations. For example, if an entity issued €1 million of debt when the market required a rate of return of 6 per cent, but that required rate subsequently rises to 8 per cent, then the unrealized savings would include the difference between what the entity received for the debt and what they would receive at the new rate. This unrealized saving would benefit the organization throughout the loan as a result of the lower interest charges.

between the forces motivating the business firm to make profit by one means rather than by another and the difference between the events on which the two methods of making profit depend require that the two kinds of gain be separated if the two types of decisions involved are to be meaningfully evaluated.

As with CPP, the CCA model described above has been identified as having a number of strengths and weaknesses. Some of the criticisms relate to its reliance on replacement values. The CCA model we have just described uses replacement values, but what is the rationale for replacement cost? Perhaps it is a reflection of the 'real' value of the particular asset. If people in the market are prepared to pay the replacement cost, and if we assume economic rationality, then the amount paid must be a reflection of the returns it is expected to generate. However, it might not be worth that amount (the replacement cost) to all firms – some firms might not elect to replace a given asset if they have an option. Further, past costs are sunk costs and if the entity were required to acquire new plant it might find it more efficient and less costly to acquire different types of assets. If it did buy it, then this might reflect that it is actually worth much more. Further, replacement cost does not reflect what it would be worth if the firm decided to sell it.

As was indicated previously, it has been argued that separating holding gains and losses from other results provides a better insight into management performance, as such gains and losses are due to impacts generated outside the organization; however, this can be criticized on the basis that acquiring assets in advance of price movements might also be part of efficient operations.

Another potential limitation of CCA is that it is often difficult to determine replacement costs. The approach also suffers from the criticism that allocating replacement cost via depreciation is still arbitrary, just as it is with historical cost accounting.

An advantage of CCA is better comparability of various entities' performance, as one entity's profits are not higher simply because it bought assets years earlier and therefore would have generated lower depreciation under historical cost accounting.

Chambers, an advocate of CCA based on exit values, was particularly critical of the Edwards and Bell model of accounting. He states (1995, p. 82) that:

In the context of judgement of the past and decision making for the future, the products of current value accounting of the Edwards and Bell variety are irrelevant and misleading.

We now briefly consider some of the key principles underlying the alternative accounting model prescribed by Chambers and a number of others – a model that relies upon the use of *exit values*.

5.5 Exit price accounting: the case of Chambers' continuously contemporary accounting

Exit price accounting has been proposed by researchers such as MacNeal, Sterling and Chambers. It is a form of current cost accounting that is based on valuing assets at their net selling prices (exit prices) at the accounting date and on the basis of orderly sales. Chambers coined the term 'current cash equivalent' to refer to the cash that an entity would

expect to receive through the orderly sale of an asset, and he held the view that information about current cash equivalents was fundamental to effective decision-making. He labelled his method of accounting continuously contemporary accounting, or CoCoA.

Although he generated some much cited research throughout the 1950s (such as Chambers, 1955) a great deal of his work culminated in 1966 in the publication of *Accounting, Evaluation and Economic Behavior*. This document argued that the key information for economic decision-making relates to capacity to adapt – which was argued to be a function of current cash equivalents (Chambers, 1966). The statement of financial position (balance sheet) is considered to be the prime financial statement under CoCoA, and should show the net selling prices of the entity's assets. Profit would directly relate to changes in adaptive capital, with adaptive capital reflected by the total exit values of the entity's assets. In other words, profit is directly tied to the increase (or decrease) in the current net selling prices of the entity's assets. No distinction is drawn between realized and unrealized gains. Unlike some other models of accounting, all gains are treated as part of profit. Profit is that amount that can be distributed, while maintaining the entity's adaptive ability (adaptive capital). CoCoA abandons notions of realization for recognizing revenue, and hence revenue recognition points change relative to historical cost accounting. Rather than relying on sales, revenues are recognized at such points as production or purchase.

As indicated previously in this chapter, how one calculates income is based, in part, on how one defines wealth. According to Sterling, an advocate of exit price accounting, (1970b, p. 189).

The present [selling] price is the proper and correct valuation coefficient for the measurement of wealth at a point in time and income is the difference between dated wealths so calculated.

In developing the CoCoA model, Chambers made a judgement about what people need in terms of information. Like authors such as Edwards and Bell, and unlike some of the earlier work which documented existing accounting practices to identify particular principles and postulates (descriptive research),²⁵ Chambers set out to develop what he considered was a superior model of accounting – a model that represented quite a dramatic change from existing practice. We call this prescriptive or normative research. The research typically highlighted the limitations of historical cost accounting and then proposed an alternative on the basis of an argument that it would enable better decision-making. Chambers adopted a decision usefulness approach and within this approach he adopted a decision-models perspective.²⁶

²⁵ As a specific example of the inductive (descriptive) approach to theory development we can consider the work of Grady (1965). This research was commissioned by the American Institute of Certified Public Accountants and documented the generally accepted conventions of accounting of the time.

²⁶ As indicated in Chapter 1, decision usefulness research can be considered to have two branches, these being the *decision-makers emphasis*, and the *decision-models emphasis*. The *decision-makers emphasis* relies upon undertaking research that seeks to ask decision-makers what information they want. Proponents of the *decision-models emphasis*, on the other hand, develop models based upon the researchers' perceptions about what is necessary for efficient decision-making. Information prescriptions follow (for example, that information should be provided about the market value of the reporting entity's assets). This branch of research typically assumes that different classes of stakeholders have identical information needs. Unlike the decision-makers emphasis, the decision-models emphasis does not ask the decision-makers what information they want, but, instead, it concentrates on what types of information are considered by the researcher to be useful for decision-making.

Chambers' approach is focused on new opportunities – the ability or capacity of the entity to adapt to changing circumstances and the most important item of information to evaluate future decisions is, according to Chambers, current cash equivalents. Chambers makes an assumption about the objective of accounting – to guide future actions. Capacity to adapt is the key and the capacity to adapt to changing circumstances is dependent upon the current cash equivalents (realizable values) of the assets on hand. The higher the current market value of the entity's assets the greater is the ability of the organization to adapt to changing circumstances.

However, Chamber's CoCoA model never gained widespread acceptance. Just as Chambers was critical of the Edwards and Bell model, Edwards and Bell were also critical of Chambers' approach. For example, Edwards (1975, p. 238) states:

I am not convinced of the merit of adopting, as a normal basis for asset valuation in the going concern, exit prices in buyer markets. These are unusual values suitable for unusual situations. I would not object in principle to keeping track of such exit prices at all times and, as Solomons (1966) has suggested, substituting them for entry values when they are the lesser of the two and the firm has taken a definite decision not to replace the asset, or even the function it performs.

Despite the lack of support at the time for Chambers' CoCoA model, some of its underlying principles are consistent with the arguments used today by those who support a move towards using *fair values* in the statement of financial position. An increasing requirement to use fair values as the basis of asset and liability valuations in some accounting standards is a controversial issue in both academic and practitioner debates. The next section of this chapter will focus on aspects of the current debate surrounding the use of *fair value accounting*.

5.6 Fair value accounting

Fair value is an asset (and liability) measurement concept that has been used in an increasing number of accounting standards in recent years. In the IASB's proposed accounting standard on fair value (due to be published in 2011, with a near identical accounting standard to be published by the FASB)²⁷ fair value is defined as:

the price that would be received to sell an asset or paid to transfer a liability in an *orderly transaction* between *market participants* at the measurement date (IASB, 2010, p. 5, paragraph 1, emphasis in original)

If there is an active and liquid market in which assets are traded that are identical to the asset to be valued, then the fair value will be equivalent to the asset's market value. This

²⁷ At the time of writing this chapter, the IASB had published (in August 2010) a 'staff draft' of the proposed forthcoming IFRS on Fair Value Measurement. This was an interim stage between an exposure draft that had been published for comment in 2009 and the final publication of the IFRS expected in 2011. The 'staff draft' incorporates all the decisions made by the IASB (in conjunction with the FASB) up to March 2010.

technique of identifying a fair value is known as *mark to market*. However, the IASB (and FASB) recognize that there will be instances where assets for which fair values are required do not have markets where identical assets are actively traded, so a directly comparable market value is not available. In these circumstances the market price of a very similar asset or liability can be used or, where there is not an active market for the form of asset that is to be fair valued (so market values for an identical or similar asset cannot be observed), an alternative is to use an accepted valuation model to infer the fair value. This technique is known as *mark to model* and requires the identification of both an accepted valuation model and the inputs required by the model to arrive at a valuation. In practice, the best estimate of the exit price (realizable value), as preferred by Chambers, is taken as the fair value of the asset (IASB, 2010, p. 5, paragraph 2).

The IASB and FASB's proposed (similar) accounting standards on fair value measurement establish a *fair value hierarchy* in which the highest attainable level of inputs must be used to establish the fair value of an asset or liability. Levels 1 and 2 in the hierarchy are *mark to market* situations, with the highest level, level 1, being 'quoted prices (unadjusted) in active markets for identical assets or liabilities' (IASB, 2010, p. 14, paragraph 77) while level 2 are directly observable inputs other than level 1 market prices (level 2 inputs could include market prices for similar assets or liabilities, or market prices for identical assets but that are observed in less active markets). Level 3 inputs are *mark to model* situations where observable inputs are not available and risk-adjusted valuation models need to be used instead.

Permitting, and in some cases requiring, certain categories of assets and liabilities to be valued at fair value has been controversial. In this chapter we will focus on two of the key features of fair value that have attracted heated debate: first, the *volatility* and *procyclicality* that some argue can be (and has been) introduced into net asset and profit figures when the markets used to determine an asset's fair value are themselves volatile; and second, aspects of the *decision usefulness* normative position underlying the use of fair values. This decision usefulness position maintains that the role of financial accounting is to provide information that is useful to help investors make certain types of investment decisions (a normative position that is shared with Chambers, who advocated a similar exit value measurement basis). But before discussing these issues, it would be helpful to outline the situations when fair values are permitted and when they are required by accounting standards, and how any changes in fair values are recorded in the income statement.

Required and permitted uses of fair values

Under current IASB rules, within a range of International Accounting Standards (IASs) and International Financial Reporting Standards (IFRSs), many assets are required to be included in the statement of financial position at historical cost (less amortization or impairment where appropriate), some are required to be included at fair value, and there are some types of assets where organizations have the option of including the asset either at historical cost or fair value (Nobes and Parker, 2010, p. 204). Where an organization chooses to use fair value for a type of asset in this final category, it must then use fair values for all of the assets it has of the same type and cannot *usually* change back to using historical costs for this type of asset in the future.

FASB accounting rules in the United States have in the past been much more restrictive in the use of fair values than the IASB rules (Zeff, 2007), although there are moves towards much greater use of fair values. This is proving controversial – as shown in Accounting Headline 5.3.

Accounting Headline 5.3

Controversy of extension of fair value accounting in the United States

FASB in midst of 'religious war' on fair value

By Mario Christodoulou

A member of the US accounting standard setter has likened attempts to bring in fair value to a 'religious war' in a speech with regulators this week.

Lawrence Smith, board member with the Financial Accounting Standards Board (FASB), made the comment in a panel discussion with US audit regulator, the Public Company Accounting Oversight Board, in the midst of a far ranging consultation on the accounting principle.

FASB is pushing ahead with plans to bring in a full fair value measurement model which would force banks to value their financial assets at market prices. The proposals are being fought by banks who argue the rules would add volatility to balance sheets.

Smith said he is not a 'fair value zealot', but was swayed to the model when he saw the effect on deposits.

'That's what threw me over the edge,' he said.

'Some people have advised us that we shouldn't say this, but I'll say it – fair value, to some of us, is almost like a religious war out there and we are trying to deal with that as best we can.'

FASB is attempting to harmonise its accounting rules with international standards, despite clear differences in their approach to fair value. Whereas FASB's proposal measures assets measured at fair value, the international model allows some loans to be valued at amortised cost.

The contentious proposals was passed by a single vote, with the five-member FASB board split 3-2.

Smith's comment will likely widen the gap between FASB's proposal and its international counterpart, the International Accounting Standards Board (IASB). Failure to reach agreement on the standard will undermine US attempts to adopt international rules.

The US Securities and Exchange Commission is currently investigating the impact of international accounting rules on US markets. A key part of their final decision will depend on the level of convergence between US and international accounting rules, with fair value being among the most important projects on the table.

Source: *Accountancy Age*, 22 July 2010 (online)

Under both FASB and IASB rules certain types of liabilities also have to be included in the statement of financial position at fair value. This requirement covers liabilities held for trading and derivative liabilities.

Under IASB rules, gains or losses arising on fair valuing: derivatives (both assets and liabilities), investments held solely for trading (again, both assets and liabilities) and assets

that an organization chooses to value at fair value (where it has the option to do so) are taken to profit or loss. These items are known as ‘fair value through profit and loss’, with the latter category (where the organization has taken the option to value at fair value instead of historical cost) termed ‘designated at fair value through profit and loss’. In contrast any gains or losses arising from fair valuing investments that are, in principle, available for sale (in other words, investments that were not acquired solely for trading, such as shares owned in other companies, even where there is not an intention to sell these shares) are taken to the statement of comprehensive income and do not affect the reported profit or loss. This removes the effect of any volatility in the market values of these assets (which may be held for the long-term) from the profit or loss figure, but any volatility in the market values of other types of assets will lead to volatility in the profit or loss figure. Nobes and Parker (2010, p. 207) explain:

The managers of companies do not generally like volatility, so they like to treat as few [financial/investment] assets as possible as ‘trading’. Since some financial assets clearly cannot be held to maturity because they have no maturity date (e.g. shares), it is common for companies (except financial institutions) to treat most financial assets as available for sale. In contrast, the standard-setters believe that all financial assets should be treated as ‘trading’ ... This is why the IASB added the option to IAS 39 for other financial assets to be treated in the same way as a trading asset.

In November 2009 the IASB published the first stage of a new IFRS for financial instruments – IFRS 9 – which is to eventually replace the existing accounting standard on this topic, IAS 39. Given the controversial nature of many aspects of accounting for financial instruments, the IASB unusually chose to develop IFRS 9, and withdraw the respective provisions of IAS 39, in three stages. The first of these stages includes rules on the use of fair values when accounting for financial assets (new rules on accounting for financial liabilities will be included in a later stage of IFRS 9). These requirements have to be implemented by companies, at the latest, for accounting periods beginning on or after 1 January 2013, although companies may implement them earlier. IFRS 9 will simplify the guidance on use of fair values so will change some of the fair value accounting rules outlined above. Specifically for financial assets (fair valuing rules for the other categories of assets and liabilities discussed above are not affected):

- The organization’s ‘business model’ related to the financial asset, and the ‘contractual cash flow characteristics’ of the financial asset (IFRS 9, paragraph 4.1) will be used to determine the treatment of the asset.
- If an objective of the business model is solely to hold the asset to realize its contractual cash flows, and these only comprise payment of principal and interest, then at the accounting date the asset has to be valued at historical cost (or fair value at the date of acquisition if different), adjusted for amortization and impairment if relevant. (IFRS 9, paragraphs 4.2 and 5.2.2)
- All other financial assets must be included in the statement of financial position at fair value. (IFRS 9, paragraph 4.4)
- Any changes in the value of a financial asset (either one held at amortized or impaired historical cost, or one held at fair value) have to be recognized in the income statement

as part of the profit or loss for the period, unless the asset is an investment in the equity of another entity and is not held for trading (this still has to be recorded at fair value) and the organization has made an irrevocable election at the date of acquisition to treat gains or losses on this investment as part of comprehensive income. (IFRS 9, paragraphs 5.4.1, 5.4.2 and 5.4.4)

IFRS 9 reduces the ability of organizations to classify investments in a way that will enable volatility in the values of these investments to bypass the reported profit and loss figure by taking changes in values to the statement of comprehensive income. We will now move on to discuss the added volatility that use of fair values is claimed to have introduced into accounting results.

Fair values and added volatility and procyclicality in accounting measures

In using market prices, rather than inflation-adjusted historical costs, fair value measurements provide valuations for assets (and for any fair valued liabilities) that factor into the values current market conditions at the accounting date. This is a feature they share with realizable (exit) values – as championed years earlier by Chambers and others – and replacement cost values. One key outcome of this reliance on market values is that where the underlying asset markets that are used to derive the fair values for a type of asset suffer from volatility, this volatility will be reflected in the values of the fair valued assets (and liabilities) shown in the statement of financial position. In other words, using fair values can result in considerable volatility in the statement of financial position.

As we will see when we discuss conceptual frameworks in the next chapter, current accounting practice (in very broad terms) is to measure income (or profit) as the difference between the net asset figure in the statement of financial position at the start of the accounting period and the net asset figure at the end of the accounting period. Therefore, where use of fair value for a particular type of asset or liability introduces volatility into figures in the statement of financial position, this will also lead to volatility in figures in the income statement. Depending on the specific accounting treatment required in accounting standards for an individual type of asset or liability, this volatility can (and often is) within the profit or loss for the period.

During the sub-prime banking crisis it was claimed by many (especially banks themselves) that accounting requirements to value many of their assets at fair value exacerbated the crisis (Laux and Leuz, 2009; Power, 2010). This is a phenomenon termed procyclicality. It is argued that when markets for financial assets (such as shares, bonds and derivatives) are booming, the value of these assets held by banks, and shown at fair value in their statements of financial position, will similarly rise significantly above their historical cost – thus increasing the reported net assets and capital and reserves of the bank. As banking regulations usually set bank lending limits in terms of a proportion (or multiple) of capital and reserves, this increase in the reported fair value of the assets of a bank will enable a bank to lend more. Some of this additional lending may fuel further demand in the markets for financial assets – thus further increasing the market values of these assets held by banks and further increasing their reported capital and reserves. This, it is argued, will enable banks to lend even more and thus will help to create an upward spiral in financial assets prices and bank lending that becomes increasingly disconnected from the underlying real economic values of the assets in these markets (Laux and Leuz, 2009).

Conversely, it was argued by many at the time of the sub-prime banking crisis that when markets for financial assets are in free-fall (as they were at times during the crisis), fair value accounting exacerbates a downward spiral of assets prices and bank lending that is equally unreflective of (and significantly overstates) decreases in real underlying economic values (Laux and Leuz, 2009). The basis of this viewpoint is that requirements to mark to market financial assets held by banks may lead to a rapid erosion in the capital and reserves shown in the banks' statements of financial position. This will reduce their lending limits (where these are tied to their reported levels of capital and reserves) and will both reduce bank lending (thus reducing demand in financial markets, putting further downward pressure on asset prices in these markets) and will possibly require the banks to sell some of the financial assets they hold to release liquidity. This will put further downward pressure on the prices of financial assets, leading to a downward price spiral as these reduced prices further reduce the reported net assets of the banks.

Although these impacts of fair value accounting were widely articulated at the time of the sub-prime banking crisis, Laux and Leuz (2009) argue many of these claimed empirical effects were not caused by fair value accounting, so the *volatility and procyclicality* case against fair value accounting is not as clear cut as the above arguments indicate. Laux and Leuz (2009, p. 827) indicate that while there are some legitimate concerns about the impact of fair values:

the concern about the downward spiral is most pronounced for FVA [fair value accounting] in its pure form but it does not apply in the same way to FVA as stipulated by US GAAP or IFRS. Both standards allow for deviations from market prices under certain circumstances (e.g., prices from fire sales). Thus, it is not clear that the standards themselves are the source of the problem.

The basis of this argument is that, as we saw earlier, both IFRSs and US GAAPs permit fair values to be determined using data other than direct market observations in many circumstances. These are referred to as level 2 and level 3 in the fair value measurement hierarchy. In situations where markets are demonstrably not providing values based on *orderly* transactions or for any other reason are not operating efficiently (for example, due to illiquidity in the markets), then rather than using level 1 fair value measurements (directly observed market prices for identical assets), then level 2 mark to market or level 3 mark to model valuations should be used. Laux and Leuz (2009) explain that during the sub-prime banking crisis, many banks moved to using level 2 and 3 valuations rather than level 1 valuations for many financial assets, and also took advantage of provisions to allow some assets to be reclassified from fair value to historical cost categories in special circumstances, thus acting as a 'damper' reducing the speed (or acceleration) of any procyclical effects. They also argue that any failure to provide fair values in financial statements during economic downturns *could* in itself cause markets to overreact and/or misprice company shares:

it is also possible that market reactions are even more extreme if current market prices or fair-value estimates are not disclosed to the market. We are not aware of any empirical evidence that investors would be calmer under HCA. Investors are not naïve; they know about the problems, e.g., in the subprime-loan market, and hence will draw inferences even in the absence of fair-value disclosures (and in that case might assume the worst). Thus, lack of transparency could make matters worse. Furthermore, even if investors were to react more calmly

under HCA, this may come at the price of delaying and increasing the underlying problems (e.g., excessive subprime lending). (Laux and Leuz, 2009, p. 828)

Apart from the mainly empirical question of whether fair values lead to unwarranted volatility in reported asset values, and give rise to undesirable procyclical outcomes, a key normative question is whether the move to the use of fair values improves the role and functioning of financial accounting. Much of this normative debate focuses on whether the purpose of financial accounting is to provide information to help a range of financial stakeholders make effective economic decisions (which would support the move to the use of fair values) or whether financial accounting should serve more of a traditional role of helping existing investors assess the effectiveness of the directors' stewardship of the assets owned by the firm (which would support greater use of historical cost accounting).

Fair value and the decision usefulness versus stewardship role of financial accounting

Whittington (2008) distinguished between what he refers to as two competing 'world views' underlying present-day normative positions on financial accounting. He terms these the *Fair Value View* and the *Alternative View*. He argues that under the Fair Value View, the sole purpose of financial accounting is seen as being to provide information useful for a range of financial stakeholders making economic decisions based on future cash flows. In contrast, proponents of the Alternative View believe that 'stewardship, defined as accountability to present shareholders is a distinct objective, ranking equally with decision usefulness' (p. 159). We will discuss some of the implications of these different world views in Chapter 6 when we look at Whittington's criticisms of aspects of current and proposed conceptual frameworks of accounting. For the purpose of our examination in this chapter of the use of fair values, a key aspect of Whittington's critique is that fair values provide information suited for a *decision usefulness* role for financial accounting whereas historical cost accounting provides information aligned to a *stewardship* role. For the former, in situations where there has to be a trade-off, relevant information (in terms of providing information that helps forecast future cash flows) is considered more important than reliability of accounting information, and it is assumed that:

Market prices should give an informed, *non entity specific* estimate of cash flow potential, and *markets* are generally sufficiently complete and efficient to provide evidence for representationally faithful measurement on this basis. (Whittington, 2008, p. 158, emphasis in original)

As market values are considered to provide the most relevant decision-useful information, fair values in the statement of financial position are considered to be more important than information in the income statement. The former thus becomes the primary financial statement while income statements just record the difference in net asset (fair) value from one year to the next (Ronen, 2008).

In contrast, for a primarily stewardship role the reporting of the impact of transactions entered into by the firm is considered to be of key importance. This information is captured primarily in the income statement, with the statement of financial position recording the residual amounts of cash flows that have not yet been 'used up' (or have been used but not

yet received or paid) in accordance with the realization and matching principles of accrual accounting (such as inventory purchased but not yet sold, the useful lives of tangible non-current assets that have not yet been used and can help generate income in future periods, and so on) (Ronen, 2008). For these purposes, reliability of measurement is important, and the application of prudence is regarded as important in enhancing the reliability of information (Whittington, 2008).

In considering issues of relevance versus reliability in fair value accounting, Ronen (2008, p. 186) argues that fair values do not measure the value of assets in their use to the specific firm. Therefore, despite the rationale of fair values being that they provide relevant decision-useful information, Ronen claims that fair values do not always provide the most relevant measures:

Since the fair value measurements ...are based on exit values, they do not reflect the value of the assets' employment within the specific operations of the firm. In other words, they do not reflect the use value of the asset, so they do not inform investors about the future cash flows to be generated by these assets within the firm, the present value of which is the fair value to shareholders. Thus, these exit values fall short of meeting the informativeness objective of financial statements. In a similar vein, they do not do well in serving the stewardship function, as they do not properly measure the managers' ability to create value for shareholders.

Nonetheless, exit value measures have partial relevance. Specifically, they quantify the opportunity cost to the firm of continuing as a going concern, engaging in the specific operations of its business plan; the exit values reflect the benefits foregone by not selling the assets.

In assessing the reliability of fair value information, Ronen (2008, p. 186) explains that under fair value accounting, level 1 measurements can generally be considered reliable, but for level 2 and 3 measurements:

Level 2 involves estimations of fair value based on predictable relationships among the observed input prices and the value of the asset or liability being measured. The degree of reliability one can attach to these derived measures would depend on the goodness of the fit between the observed input prices and the estimated value. Measurement errors and mis-specified models may compromise the precision of the derived estimates. Nonetheless, Level 2 is not as hazardous as Level 3. In the latter, unobservable inputs, subjectively determined by the firm's management, and subject to random errors and moral hazard, may cause significant distortions both in the balance sheet and in the income statement. Moreover, discounting cash flows to derive a fair value invites deception.

Looking at considerations of reliability in more depth, Power (2010) argues that reliability is understood differently by different people and is, in effect, socially constructed. He partially explains the rise of fair value accounting in terms of a specific perception of reliability grounded in the developing discipline of financial economics, which has been increasingly drawn upon by accounting regulators to give authority (from outside the discipline of accounting) to their pronouncements. He explains (p. 202) that despite the many unrealistic

assumptions underlying financial economics, with these being widely articulated in the wake of the sub-prime banking crisis, financial economics has provided an attractive body of knowledge for accounting standard setters:

Whitley (1986) suggests that the close links [of finance theory] with practice had more to do with financial economics as a reputational system and less to do with the direct applicability of its analytical core. This is consistent with Hopwood's (2009: 549) critique of the 'growing distance of the academic finance knowledge base from the complexities of practice and practical institutions.' Yet, as Abbott (1988) has argued, purely 'academic' knowledge has always played a significant role for professions, providing the rational theorisations needed by practice. Financial economics is almost the perfect example of this. (Power, 2010, p. 202)

... proponents of fair values in accounting argue for their greater relevance to users of financial information, but the deeper point is that they also redefine the reliability of fair values supported by financial economics, both in terms of specific assumptions and in terms of its general cultural authority. Against sceptics, key accounting policy makers were able to acquire confidence in a knowledge base for accounting estimates rooted in a legitimised discipline. (Power, 2010, p. 205)

Power (2010, p. 201) argues that in this context, fair value – as a measurement basis grounded in financial economics' conceptions of the role of accounting as being to provide decision-useful information to a range of financial stakeholders – becomes the 'acceptable' measurement basis:

once it is admitted that market prices may not reveal fundamental value, due to liquidity issues or other reasons, then it can be argued that the real foundation of fair value lies in economic valuation methodologies; level 3 methods are in fact the engine of markets themselves, capable of 'discovering' values for accounting objects which can only be sold in 'imaginary markets'. It follows that the [fair value] hierarchy is more of a liquidity hierarchy than one of method, but overall it expresses the imperative of market alignment which informs fair value enthusiasts.

The sociology of reliability to emerge from these arguments suggests that subjectivity and uncertainty can be transformed into *acceptable fact* via strategies which appeal to broader values in the institutional environment which even opponents must accept. Accounting 'estimates' can acquire authority when they come to be embedded in taken-for granted routines. (Power, 2010, p. 201, emphasis in original)

As fair value accounting looks likely to grow in importance and influence, as an increasing number of accounting standards require its use, debates over issues such as the impact of fair values and normative questions about the desirability of different aspects of fair values are also likely to gain even greater prominence. Academic studies examining the reactions of users to fair value accounting disclosures should provide important evidence to inform this debate. Many such studies have in the past examined reactions to the earlier attempts at reflecting current values in financial statements, such as current cost and CPP accounting. We now move on to discuss insights provided by these studies.

5.7 The demand for price-adjusted and value-adjusted accounting information

One research method often used to assess the usefulness of particular disclosures is to look for a stock market reaction (share price reaction) around the time of the release of the information, the rationale being that if share prices react to the disclosures then such disclosures must have information content. That is, the information impacts on the decisions made by individuals participating in the capital market. A number of studies have looked at the stock market reaction to current cost and CPP information. Results are inconclusive, with studies such as Ro (1980, 1981), Beaver *et al.* (1980), Gheyara and Boatsman (1980), Beaver and Landsman (1987), Murdoch (1986), Schaefer (1984), Dyckman (1969), Morris (1975), and Peterson (1975) finding limited evidence of any price changes around the time of disclosure of current cost information. (However, Lobo and Song (1989) and Bublitz *et al.* (1985) provide limited evidence that there is information content in current cost disclosures.)

While the majority of share price studies show little or no reaction to price-adjusted accounting information, it is possible that the failure to find a significant share price reaction might have been due to limitations in the research methods used. For example, there could have been other information released around the time of the release of the CCA/ CPP information. However, with the weight of research that indicates little or no reaction by the share market, we are probably on safe ground to believe that the market does not value such information when disclosed within the annual report. Of course there are a number of issues why the capital market might not react to such information. Perhaps individuals or organizations are able to obtain this information from sources other than corporate annual reports, and hence, as the market is already aware of the information, no reaction would then be expected when the annual reports are released.

Apart from analysing share price reactions, another way to investigate the apparent usefulness of particular information is to undertake surveys. Surveys of managers (for example Ferguson and Wines, 1986) have indicated limited corporate support for CCA, with managers citing such issues as the expense, the limited benefits from disclosure, and a lack of agreement as to the appropriate approach to explain the limited support for CCA.

In the United States, and in relation to the relevance of FASB Statement No. 33 (which required a mixture of CCA and CPP information), Elliot (1986, p. 33) states:

FASB Statement No. 33 requires the disclosure of value information on one or two bases, either price level adjusted or current cost. Surveys taken since this rule became effective suggest that users do not find the information helpful, don't use it, and they say it doesn't tell them anything they didn't already know. Preparers of the information complain that it is a nuisance to assemble.

Given the above results, we can perhaps say that, in general, there is limited evidence to support the view that the methods used to account for changing prices have been deemed to be successful in providing information of relevance to financial statement users. This is an interesting outcome, particularly given that many organizations over time have elected to provide CCA/ CPP information in their annual reports even when there was no requirement to do so, and also given that many organizations have actively lobbied

for or against the particular methods of accounting. Adopting the method for disclosure purposes, or lobbying for it, implies that corporate management, at least, considered that the information was relevant and likely to impact on behaviour – a view at odds with some of the surveys and share price studies reported earlier.

In relation to research that has attempted to analyse the motivations underlying the corporate adoption of alternative accounting methods, an influential paper was Watts and Zimmerman (1978). That paper is generally considered to be one of the most important papers in the development of Positive Accounting Theory (which we consider in Chapter 7). The authors investigated the lobbying positions taken by corporate managers with respect to the FASB's 1974 Discussion Memorandum on general price level accounting (current purchasing power accounting). As we know from material presented in this chapter, if general price level accounting were introduced, then in times of rising prices, reported profits would be reduced relative to profits reported under historical cost conventions. The reduction in profits would be due to such effects as higher depreciation and purchasing power losses due to holding net monetary assets.

Watts and Zimmerman proposed that the political process was a major factor in explaining which corporate managers were more likely to favour or oppose the introduction of general price level accounting. The political process itself is seen as a competition for wealth transfers. For example, some groups may lobby government to transfer wealth away from particular companies or industries (for example, through increased taxes, decreased tariff support, decreased subsidies, increases in wages awarded, more stringent licensing arrangements) and towards other organizations or groups otherwise considered to be poorly treated. Apart from government, groups such as consumer groups (perhaps through product boycotts), employee groups (through wage demands or strikes) and community interest groups (through impeding operations or lobbying government) can act to transfer wealth away from organizations through political processes.

The perspective of Watts and Zimmerman was that entities deemed to be politically visible are more likely to favour methods of accounting that allow them to reduce their reported profits. High profitability itself was considered to be one attribute that could lead to the unwanted (and perhaps costly) attention and scrutiny of particular corporations.

The corporate lobbying positions in the submissions made to the FASB are explained by Watts and Zimmerman on the basis of self-interest considerations (rather than any consideration of such issues as the 'public interest').²⁸ The study suggests that large firms (and large firms are considered to be more politically sensitive) favour general price level accounting because it enables them to report lower profits.^{29, 30}

Other research has also shown that companies might have supported CCA for the political benefits it provided. In times of rising prices, the adoption of CCA (as with

²⁸ As we discuss in Chapter 7, and as we already discussed in earlier chapters, one of the central assumptions of Positive Accounting Theory is that all individual action is motivated by self-interest considerations, with that interest being directly tied to the goal of maximizing an individual's own wealth.

²⁹ Ball and Foster (1982), however, indicate that size can be a proxy for many things other than political sensitivity (such as industry membership).

³⁰ Within the Watts and Zimmerman study many of the respondents were members of the oil industry and such industry members were also inclined to favour the introduction of general price level accounting. Consistent with the political cost hypothesis, 1974 (the time of the submissions) was a time of intense scrutiny of oil companies.

general price level accounting) can lead to reduced profits. In a New Zealand study, Wong (1988) investigated the accounting practices of New Zealand companies between 1977 and 1981 and found that corporations that adopted CCA had higher effective tax rates and larger market concentration ratios than entities that did not adopt CCA, both variables being suggestive of political visibility. In a UK study, Sutton (1988) found that politically sensitive companies were more likely to lobby in favour of CCA. Sutton investigated lobbying submissions made in the United Kingdom in relation to an exposure draft of a proposed accounting standard that recommended the disclosure of CCA information. Applying a Positive Accounting Theory perspective he found support for a view that organizations that considered they would benefit from the requirement tended to lobby in support of it. Those expected to benefit were:

- capital-intensive firms because it was expected that the adoption of CCA would lead to decreased profits (due to higher depreciation) and this would be particularly beneficial if the method was accepted for the purposes of taxation; and
- politically sensitive firms, as it would allow them to show reduced profits.

Examining possible perceived political ‘benefits’ of inflation-adjusted accounting information from a different perspective, Broadbent and Laughlin (2005) draw on debates in the United Kingdom in the 1970s to argue that the then British government considered CPP as likely to produce undesirable economic impacts compared to CCA. The main issue was that the government believed CPP accounts could foster disinvestment at a time when the UK economy needed investment. In support of their argument, Broadbent and Laughlin (2005) quote Bryer and Brignall (1985, p. 32) who state that in launching a governmental committee of inquiry to examine inflation accounting a government minister had commented that:

inflation accounting ... involved issues much broader than pure accounting matters. The committee would ‘take into account a broad range of issues including the implications for investment and efficiency; allocation of resources through the capital market; the need to restrain inflation in the UK’.³¹

5.8 Professional support for various approaches to accounting for changing prices and asset values

Over time, varying levels of support have been given to different approaches to accounting in times of rising prices. CPP was generally favoured by accounting standard-setters from the 1960s to the mid-1970s, with a number of countries, including the United States, the United Kingdom, Canada, Australia, New Zealand, Ireland, Argentina, Chile and Mexico, issuing documents that supported the approach. For example, in the United States the American Institute of Certified Public Accountants (AICPA) supported general price level restatement in Accounting Research Study No. 6 released in 1961. The Accounting Principles Board also supported the practice in Statement No. 3.

³¹ This quotation indicates the existence of broader perceived economic impacts of accounting regulation, as discussed in Chapter 3.

Early in its existence, the FASB also issued an exposure draft supporting the use of general purchasing power – ‘Financial Reporting in Units of General Purchasing Power’ – which required CPP to be disclosed as supplementary information.

From about 1975, preference tended to shift to CCA. In 1976 the SEC released ASR 190 which required certain large organizations to provide supplementary information about ‘the estimated current replacement cost of inventories and productive capacity at the end of the fiscal year for which a balance sheet [now referred to as a Statement of Financial Position] is required and the approximate amount of cost of sales and depreciation based on replacement cost for the two most recent full fiscal years’. In Australia, a Statement of Accounting Practice (SAP 1) entitled ‘Current Cost Accounting’ was issued in 1983. Although not mandatory, SAP 1 recommended that reporting entities provide supplementary CCA information. In the United Kingdom, support for CCA was demonstrated by the Sandilands Committee (a government committee) in 1975. In 1980 the Accounting Standards Committee (UK) issued SSAP 16, which required supplementary disclosure of current cost data (SSAP 16 was withdrawn in 1985).

In the late 1970s and early 1980s many accounting standard-setters issued recommendations that favoured disclosure based upon a mixture of CPP and CCA. Such ‘mixed’ reporting recommendations were released in the United States, the United Kingdom, Canada, Australia, New Zealand, Ireland, West Germany and Mexico. For example, in 1979 the FASB released SFAS 33 which required a mixture of information, including:

- purchasing power gains and losses on net monetary assets;
- income determined on a current cost basis; and
- current costs of year-end inventory and property plant and equipment.

Around the mid-1980s, generally a time of falling inflation, accounting professions worldwide tended to move away from issues associated with accounting in times of changing prices (as demonstrated by the UK’s withdrawal of SSAP 16 in 1985).

It is an interesting exercise to consider why particular methods of accounting did not gain and maintain professional support. Perhaps it was because (as indicated in Broadbent and Laughlin, 2005) the profession, like a number of researchers, questioned the relevance of the information, particularly in times of lower inflation. If they did question the relevance of the information to various parties (such as the capital market) it would be difficult for them to support regulation from a ‘public interest’ perspective, given the costs that would be involved in implementing a new system of accounting.³²

Even in the absence of concerns about the relevance of the information, standard-setters might have been concerned that a drastic change in our accounting conventions could cause widespread disruption and confusion in the capital markets and therefore might not be in the public interest. Although there have been numerous accounting controversies and disputes over time (for example, how to account for goodwill or research and development, or how to account for investments in associates), such controversies typically impact on only a small subset of accounts. Adopting a new model of accounting would have much more widespread effects, which again might not have been in the public interest.

³² Broadbent and Laughlin (2005) argue that the conception of ‘public interest’ will both vary from person to person (or interest group to interest group) and will also change over time.

It has also been speculated that the adoption of a new method of accounting could have had consequences for the amount of taxation that the government ultimately collected from businesses. As Zeff and Dharan (1996, p. 632) state:

Some governments fear that an accounting regimen of generally lower reported profits under current cost accounting (with physical capital maintenance) would lead to intensified pressure for a concomitant reform of corporate income tax law.

Throughout the 1970s and 1980s, many organizations opposed the introduction of alternative methods of accounting (alternative to historical cost). Corporate opposition to various alternative methods of accounting could also be explained by the notion of self-interest as embraced within the economic interest theory of regulation. Under historical cost accounting, management has a mechanism available to manage its reported profitability. Holding gains might not be recognized for income purposes until such time as the assets are sold. For example, an organization might have acquired shares in another organization some years earlier. In periods in which reported profits are expected to be lower than management wants, management could elect to sell some of the shares to offset other losses. If alternative methods of accounting were introduced, this ability to manipulate reported results could be lost.³³ Hence such corporations might have lobbied government, the basis of the submissions being rooted in self-interest. Because there are typically corporate or business representatives on most standard-setting bodies, there is also the possibility that corporations/business interests were able to capture effectively the standard-setting process (Walker, 1987).

As we have already seen in this chapter, there is some evidence that accounting information adjusted to take account of changing prices might not be relevant to the decision-making processes of those parties involved in the capital market (as reflected by various share price studies) and hence the alternative models of accounting might not be favoured by analysts (accepting the private economic interest theory of regulation, analysts might have little to gain personally if the alternative methods of accounting were introduced).

Of course we will never know for sure why particular parties did not favour particular accounting models, but what we can see is that alternative explanations can be provided from public interest theory, capture theory or the economic interest theory of regulation – theories that were discussed at greater length in earlier chapters.

Throughout the CCA/CPD debates a number of key academics continued to promote their favoured methods of accounting (and some continued to do so throughout the 1990s). We can obviously speculate what drove them – was it the public interest or was it self-interest? What do you think?

We can see that the debate is far from settled as to which method of accounting is most appropriate in accounting for changing prices. While debate in this area has generally abated since the mid-1980s it is very possible that, if levels of inflation increase to their previously high levels, such debates will again be ignited. Various authors have

³³ In recent years the discretion of management in relation to the measurement of equity investments has been reduced. IAS 39 stipulates a general requirement that such investments shall be measured at fair value.

developed accounting models that differ in many respects. Some of these differences are due to fundamental differences of opinion about the role of accounting and the sort of information necessary for effective decision-making. Because information generated by systems of accounting based on the historical cost convention is used in many decisions, major change in accounting conventions would conceivably have widespread social and economic impacts. This in itself will restrict any major modifications/changes to our (somewhat outdated) accounting system. This perspective was reflected in the 1960s, and arguably the perspective is just as relevant now.

As an example of how the profession has typically been reluctant to implement major reforms, we can consider activities undertaken in 1961 and 1962, when the Accounting Research Division of AICPA commissioned studies by Moonitz (1961), and by Sprouse and Moonitz (1962) respectively. In these documents the authors proposed that accounting measurement systems be changed from historical cost to a system based on current values. However, prior to the release of the Sprouse and Moonitz study the Accounting Principles Board of AICPA stated in relation to the Moonitz and the Sprouse and Moonitz studies that 'while these studies are a valuable contribution to accounting principles, they are too radically different from generally accepted principles for acceptance at this time' (Statement by the Accounting Principles Board, AICPA, April 1962).

As we have seen in the earlier discussion of fair value accounting, there is widespread support among accounting standard-setters for an increasing use of fair values. However, many practitioners still question the growing use of fair value accounting.

While this chapter has emphasized various issues and debates associated with how best to measure the financial performance of an entity in times when prices are changing, we must remember that financial performance is only one facet of the total performance of an entity. As we see in Chapter 9, there is much debate about how to measure and report information on the social and environmental performance of reporting entities. As with the debate we have considered in this chapter, the debates about the appropriate methodology and relevance of social and environmental information are far from settled. As has been emphasized, the practice of accounting generates a multitude of interesting debates.

Chapter summary

This chapter has explored different models of accounting that have been developed to provide financial information in periods of rising prices and other changing market conditions that impact on asset values. These models have been developed because of the perceived limitations of historical cost accounting. Critics of historical cost accounting suggest that because historical cost adopts a capital maintenance perspective which is tied to maintaining financial capital intact, it tends to overstate profits in periods of rising prices. Historical cost accounting adopts an assumption that the purchasing power of currency remains constant over time. Debate about the best model of accounting to use in periods of rising prices was vigorous in the 1960s through to the mid-1980s. During this time, inflation levels tended to be relatively high. Since this time, inflation levels internationally have tended to be low and the debate about which model to adopt to adjust for rising prices

has tended to wane. Nevertheless, there has been a general movement by regulators such as the IASB towards the use of fair values in various accounting standards – although the adoption of fair value tends to be on a piecemeal basis as particular accounting standards are developed. With this said, however, there are still various assets that are measured on the basis of historical costs.³⁴

A number of alternative models have been suggested. For example, CPP was one of the earlier models to be developed. CPP was supported by a number of professional accounting bodies during the 1960s and 1970s, although support then tended to shift to CCA. CPP uses numbers generated by historical cost accounting as the basis of the financial statements and at the end of each period CPP applies a price index, typically a general price index, to adjust the historical cost numbers. For purposes of the statement of financial position, adjustments are made to non-monetary assets. Monetary items are not adjusted by the price index. However, although monetary items are not adjusted for disclosure purposes, holding monetary items will lead to gains or losses in purchasing power which are recognized in the period's profit or loss. No gains or losses are recorded in relation to holding non-monetary items. One of the advantages of using CPP is that it is easy to apply. It simply uses the historical cost accounting numbers that are already available and applies a price index to these numbers. A disadvantage is that the adjusted prices may provide a poor reflection of the actual value of the items in question.

Another model of accounting that we considered was current cost accounting (CCA). It uses actual valuations of assets, typically based on replacement costs, and operating income is calculated after consideration of the replacement costs of the assets used in the production and sale cycle. Non-monetary assets are adjusted to take account of changes in replacement costs, and depreciation expenses are also adjusted on the basis of changes in replacement costs. While not in use today, CCA attracted support from professional accounting bodies in the early 1980s. Opponents of CCA argued that replacement costs have little relevance if an entity is not considering replacing an asset and, further, that replacement costs might not accurately reflect the current market values of the assets in question.

A further issue we considered related to changing assets values was fair value accounting. This is currently a controversial practice both among professional accountants and researchers, and has generated heated debates over its advantages and disadvantages. However, its use looks set to continue growing.

Questions

- 5.1 What assumptions, if any, does historical cost accounting make about the purchasing power of the currency?
- 5.2 List some of the criticisms that can be made of historical cost accounting when it is applied in times of rising prices.

³⁴ For example, inventory and property, plant and equipment where the entity has elected to adopt the 'cost model'.

- 5.3 Why do you think that corporate management might prefer to be allowed to use historical costs rather than being required to value assets on the basis of current values?
- 5.4 As shown in this chapter, Mautz (1973) made the following statement:
- Accounting is what it is today not so much because of the desire of accountants as because of the influence of businessmen. If those who make management and investment decisions had not found financial reports based on historical cost useful over the years, changes in accounting would long since have been made.
- Required:
Evaluate the above statement.
- 5.5 What is the 'additivity' problem inherent in historical cost accounting?
- 5.6 Explain the difference between income derived from the viewpoint of maintaining financial capital (as in historical cost accounting) and income derived from a system of ensuring that physical capital remains intact.
- 5.7 In current purchasing power accounting:
- a Why is it necessary to consider monetary assets separately from non-monetary assets?
 - b Why will holding monetary assets lead to a purchasing power loss, but holding non-monetary assets does not lead to a purchasing power loss?
- 5.8 What are holding gains, and how are holding gains treated if current cost accounting is applied? Do we need to differentiate between realized and unrealized holding gains?
- 5.9 Should 'profits' that result from holding gains be allowed to be distributed to shareholders? Explain your view.
- 5.10 What are some of the major strengths and weaknesses of historical cost accounting?
- 5.11 What are some of the major strengths and weaknesses of current purchasing power accounting?
- 5.12 What are some of the major strengths and weaknesses of current cost accounting (applying replacement costs)?
- 5.13 Despite the efforts of authors such as Chambers, Edwards and Bell, and Sterling, historical cost accounting has maintained its position of dominance in how we do financial accounting. Why do you think that historical cost accounting has remained the principal method of accounting?
- 5.14 As indicated in this chapter, various studies have provided support for a view that CCA/ CPP is of little relevance to users of financial statements. Nevertheless numerous organizations lobbied in support of the methods, as well as voluntarily providing such information in their annual reports. Why do you think this is so?
- 5.15 The IASB Framework for the Preparation and Presentation of Financial Statements does not prescribe a specific approach to measurement. However, in recent years accounting standards have been released which have shown a movement away from historical costs and a movement towards the use of fair values. Why do you

think this is occurring? Further, why do you think that conceptual frameworks have not been amended to suggest an alternative to historical costs – such as the use of fair values?

- 5.16** According to Watts and Zimmerman (1978), what factors appeared to motivate corporate management to lobby in support of general price level accounting (current purchase power accounting)?
- 5.17** Critically evaluate the claimed procyclical role of fair value accounting. How persuasive are arguments that fair value accounting's procyclicality should reduce the use of fair value accounting?
- 5.16** Compare and contrast level 1, level 2 and level 3 fair value measurements. What implications do these different measurement techniques have for the reliability of fair value disclosures?

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